Google Form Quiz: <https://docs.google.com/forms/d/e/1FAIpQLSf4BFkcUijMNfEr87ufU5ZQhAoV1G3kErgJ6LSqDD5I_Z7cHQ/viewform?usp=sf_link>

Q1. Write a Python class named Rectangle constructed by a length and width and method which can compute area of a rectangle. (5 marks)

Ans. # Paste the code below

Q2. A class named Square inherits from the above class Rectangle. It takes only one input in constructor and over-writes the area method. (5 marks)

Ans. # Paste the code below

Q3. Write a Python class named Board which is constructed with number of rows and columns. It has methods which can

a) print the board,

b) update a position with a character and

c) return list of values in the row, column, diagonal containing a given point.

Here is the sample behaviour,

board = new Board(4,5) # initializes a board with 4 rows and 5 columns having ‘0’ in all positions. Board has positions from (1,1), (1,2), …, (4,4), (4,5).

board.display() # prints the board

# [[‘0’,’0’,’0’,’0’,’0’],

# [‘0’,’0’,’0’,’0’,’0’],

# [‘0’,’0’,’0’,’0’,’0’],

# [‘0’,’0’,’0’,’0’,’0’]]

board.update((1,4),’X’) # updates the position (1,4) as ‘X’

board.display()

# [[‘0’,’0’,’0’,’X’,’0’],

# [‘0’,’0’,’0’,’0’,’0’],

# [‘0’,’0’,’0’,’0’,’0’],

# [‘0’,’0’,’0’,’0’,’0’]]

rowVals = board.returnVals((2,5),’-’) # returns a list of values in row containing position (2,5)

print(rowVals)

# [‘0’,’0’,’0’,’0’,’0’]

columnVals = board.returnVals((2,5),’|’) # returns a list of values in column containing position (2,5)

print(columnVals)

# [‘0’,’0’,’0’,’0’]

lrDiagVals = board.returnVals((2,5),’\’) # returns a list of values in left-to-right diagonal containing position (2,5)

print(lrDiagVals)

# [‘X’,’0’]

rlDiagVals = board.returnVals((2,5),’/’) # returns a list of values in right-to-left diagonal containing position (2,5)

print(rlDiagVals)

# [‘0’,’0’,’0’]

(12 marks)

Ans. # Paste the code below

------------------------Thank You. Hare Krishna 😊-------------------------